
Intra-module cabling

Cables that connect to different cards within a module as well as cables that go to the I/O panels at the rear of the module are defined as intramodule cables.

Intermodule cables, which are used to connect different modules together and to connect modules to external equipment, are discussed later in this document.

Intramodule cables are not shielded. The cable is typically round and the connector latches either bail locks or screws to prevent accidental removal. It is recommended that the faceplate connectors use a 90° cable egress, while backplane connectors should use a 180° cable egress. Either type of connector is acceptable for the I/O panels.

Cabling assignment tables are found in Appendix B.

I/O panels

Every module requires two I/O panels. These panels mount at the rear of the module. They are an integral part of the RFI shielding for the module and provide a method of bringing signals into and out of the module. The panels shown in this document, unless otherwise stated, are viewed from the rear of the module with pin 1 of the I/O connectors on top.

Universal I/O panel

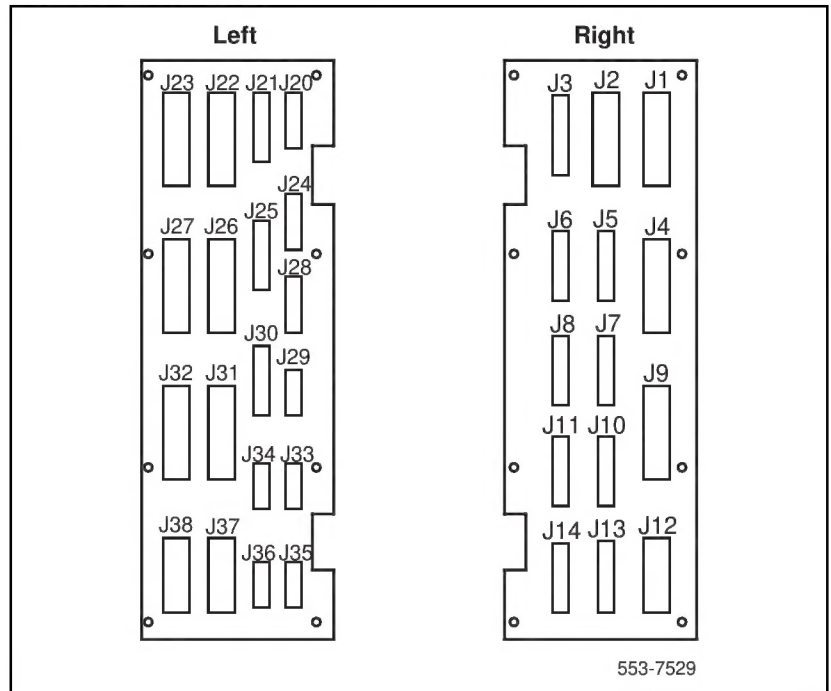
The Universal I/O Connector Panel (P0715058) is used in most of the Meridian 1 modules. This I/O panel provides the following cutouts:

- 6 ports of 36-pin Telco connectors for network cables
- 2 ports of 24-pin Telco connectors for network cables
- 3 ports of 25-pin D-sub connectors for SDI/QSDI or RS-232 cables
- 3 ports of 15-pin D-sub connectors for DTI/PRI cables
- 5 ports of 9-pin D-sub connectors for XSDI cables

The 36-pin Telco-type cutouts can use an adapter to convert to 24-pin cutouts if needed for module configuration. Example: If the maximum five groups is required, three 36-pin ports can be converted with adapters to 24-pin ports, creating a total of five 24-pin ports for network connection. [Figure 27](#) illustrates the left and right sides of the Universal I/O panels.

The I/O panel cables use bail locks and all other connectors use jack screws to prevent accidental removal.

Figure 27
Universal I/O panels



Meridian 1 modules

CPU module

The NT8D34 CPU Module employs two Universal I/O panels as described in [“Universal I/O panel” on page 28](#) and [Figure 27](#); one panel on each side of the module.

In situations where the CPU module does not normally use I/O panels, the I/O panels in the CPU module can be used to handle overflow when network modules have too many I/O. The I/O usage is recommended as follows:

- 1 For network loop usage start with J1, J2, J5, J6, J9, J10, J22, J23, J26, J27, J31, and J32.
- 2 For network superloop usage start with J16, J17, J37 and J38; then use adapter P0704007 and continue with J2, J6, J10, J22, J26, and J31.
- 3 For DTI/PRI usage start with J4, J12, and J24 for the T1; for the echo canceler start with J8, J20, and J28. If the echo canceler is not used, start with J4, J8, J12, J20, J24, and J28 for the T1.
- 4 For SDI/QSDI start with J3, J7, J11, J21, J25, and J30.
- 5 For XSDI start with J13, J14, J15, J18, and J19.

Network module

The NT8D35 and NT6D39 Network Modules use two identical Universal I/O panels (P0715058) as described in [“Universal I/O panel” on page 28](#) and [Figure 27](#).

If the I/O usage is greater than the panels can handle, overflow cables can be routed to the CPU module (for system option 71 only) or to another network module. The I/O usage is recommended as follows:

- 1 For network usage start with J1, J2, J5, J6, J9, J10, J22, J23, J26, J27, J31, and J32.
- 2 For superloop network usage start with J16, J17, J37, and J38; then use adapter P0704007 and continue with J2, J6, J10, J22, J26, and J31.

- 3 For DTI/PRI usage start with J4, J12, and J24 for the T1; for the echo canceler start with J8, J20, and J28. If the echo canceler is not used, start with J4, J8, J12, J20, J24, and J28 for the T1.
- 4 For SDI/QSDI start with J3, J7, J11, J21, J25, and J30.
- 5 For XSDI start with J13, J14, J15, J18, and J19.

Intelligent peripheral equipment module

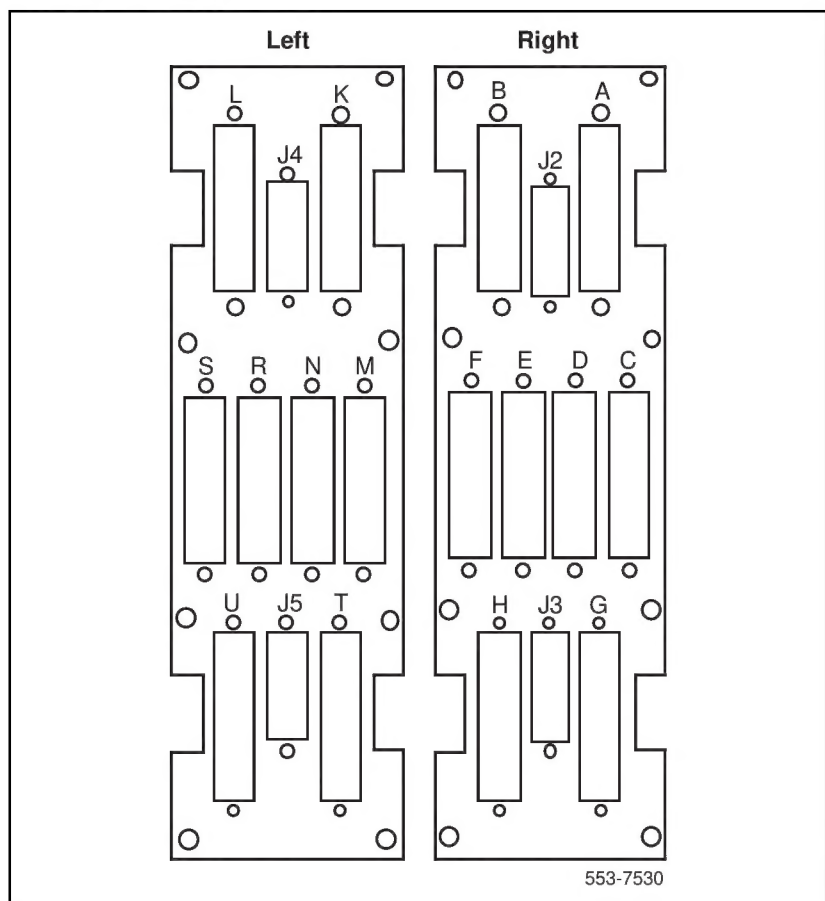
The NT8D37 IPE Module is configured with two identical I/O panels (P0699726). These two panels contain a total of sixteen 50-pin tip and ring and four 24-pin network superloop cutouts. Since only the 16-port line cards are available at this time, only twelve of the sixteen 50-pin tip and ring cutouts are used with the rest as spares.

The cable that connects a line card to the I/O panel is the NT8D81AA Tip and Ring Cable. This cable can handle either one full line card or one full line card plus half of the next line card for a total of 24 tip and ring channels.

The cable that connects the peripheral controller card to the I/O panel is the NT8D92AB. This method of cabling is used only when the network loop is cabled externally to the module. J2 on the I/O panel is always used when cabling the network loop externally with J3, J4, and J5 configured for other traffic requirements.

Tables 7 through 18 on pages 105 through 127 give the assignments for the tip and ring cabling and Tables 19 through 22 on pages 129 through 132 give the peripheral controller card to the I/O network loop cabling. Table 6 gives the cabling summary and [Figure 28](#) shows the I/O panel layout for the IPE module.

Figure 28
IPE I/O connector panels



Peripheral equipment module

The NT8D13 PE Module uses two identical I/O panels (P0701326). A total of eight 50-pin tip and ring and two 36-pin network loop cutouts is provided. Four 50-pin cutouts are used on the left side and three on the right. The last 50-pin cutout on the right side is not used at this time.

The tip and ring interface from the line card to the I/O panel uses the NT8D81AA cable assembly.

J1 and J2 on the I/O panel are used only when the network loop is cabled externally. When external network cabling is required, J1 is always used, with J2 added depending on traffic needs. The cable assembly used for J1 and J2 is the NT8D86AD.

Table 30 on page 147 gives the cabling summary for the PE module and [Figure 29](#) shows the proper orientation of the left and right PE I/O panels. Tables 23 through 29, Tables 31 and 32 define the cabling assignments for the PE module; refer to pages 133 through 150.

Remote peripheral equipment module

The NT8D47 RPE Module uses two different I/O panels to support two RPE loops. The left side uses a Universal I/O panel (P0715058), which is described in [“Universal I/O panel” on page 28](#) and [Figure 27](#). The right panel (P0701332) is used to route the RPE T1 interface signals out of the module to the MDF.

It is recommended for standardization that the I/O panel cutouts be used in the following sequence:

- 1 Use the C cutout first then the D.
- 2 For RPE loop usage start with J1 then J8.
- 3 For T1 usage start with J20, J28, and J2. For the echo canceler start with J24, J3, and then J4.
- 4 For network to DTI loop connections start with J20, J17, and finally J16.

Table 33 on page 151 gives the cabling assignment and [Figure 30](#) shows the RPE I/O panel configuration.

Figure 29
PE I/O panels

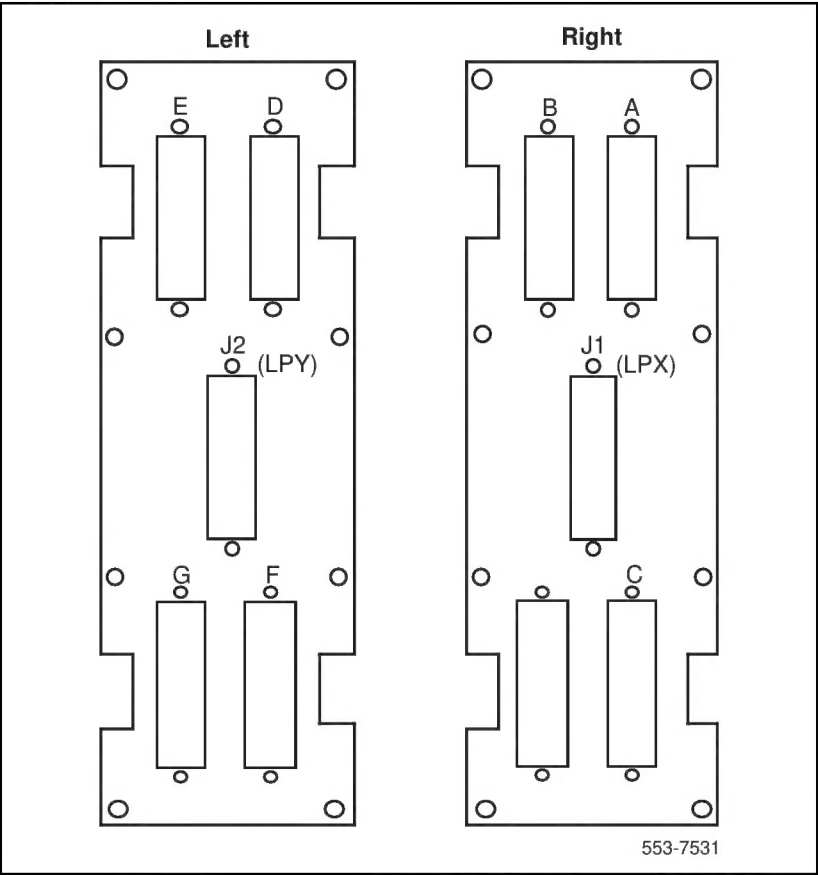
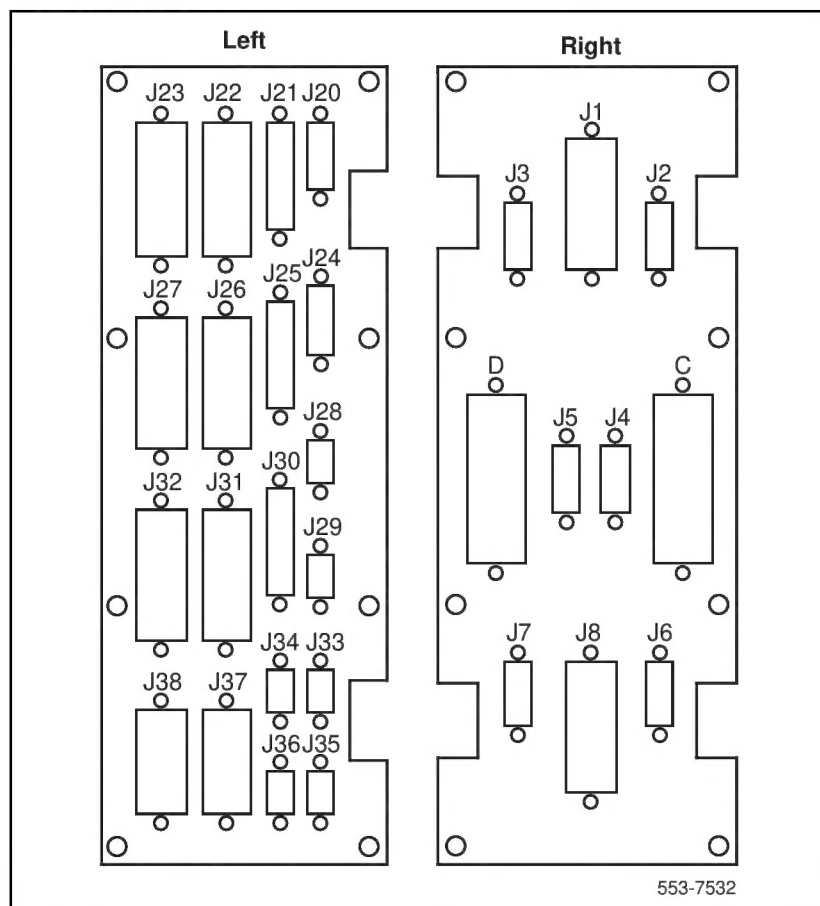


Figure 30
RPE I/O panels

Common/peripheral equipment module

The NT8D11 CE/PE Module contains a single CPU, and network, power supply, and IPE line cards. The left I/O panel (P0699733) is used to bring out the tip and ring signals from the line cards and the right I/O panel (P0699732) is used to bring out the network and CPU interfaces. Tables 34 through 41 on pages 152 through 165 give the cabling assignments and [Figure 31](#) shows the I/O panels.

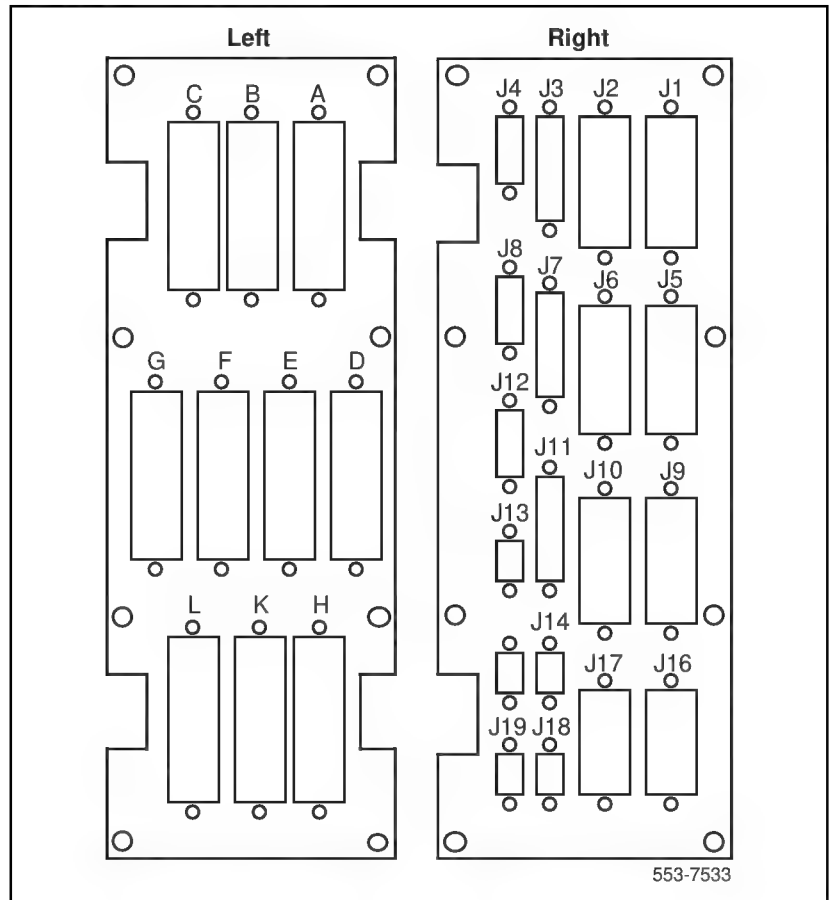
It is recommended for standardization that the I/O panel cutouts be used in the following sequence:

- 1 For network loop usage start with J1, J2, J5, J6, J9, and finally J10.
- 2 For superloop network usage start with J16 and J17; then with an adapter plate (P0704007), J1, J2, J5, J6, J9, and finally J10.
- 3 For the DTI/PRI use J5 for the T1 link and J4 for the echo canceler.
- 4 For SDIs start with J3, then J7, and finally J11.
- 5 For XSDI (NT8D41AA) start with J12, then J13, J14, J15, J18, and finally J19.
- 6 When cabling the system monitor remotely, J11 is used to bring the connection out of the module.

Core and Core/Network modules

The NT6D60 Core Module is used in the option 81 only. The NT5D21 Core/Network Module is used in options 51C, 61C, and 81C. It uses two Universal I/O panels for external connections. These panels are described in [“Universal I/O panel” on page 28](#) and Figure 27 on page 29.

Figure 31
CE/PE module I/O panels



For standardization, the following connections to the I/O panel cutouts are required:

1 For Core to Network Interface (CNI):

- location 9F to J1
- location 9D to J2
- location 10C to J5
- location 10A to J6
- location 10F to J9
- location 10D to J10
- location 9A to J22
- location 9C to J23
- location 8D to J26
- location 8F to J27

2 For Call Processor (CP):

- RS-232 DTE Port to J21
- RS-232 DCE Port to J25

3 Clock Controller (CC):

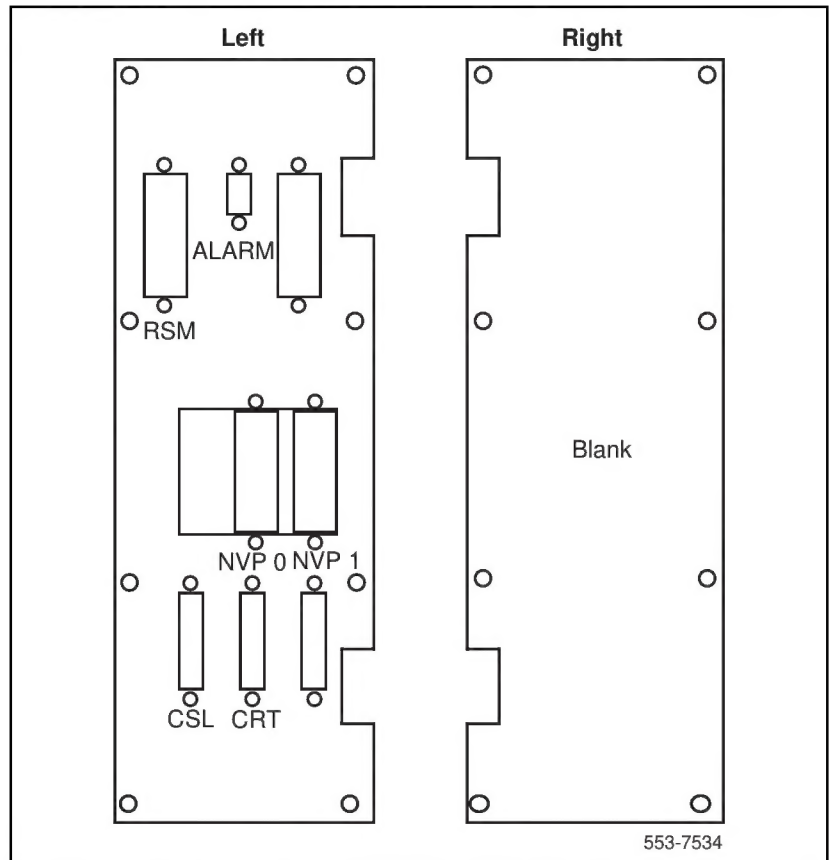
- connector J1 to J33
- connector J2 to J29.
- connector J3 to J32.

Meridian Mail module

The NT6D44 Meridian Mail Module uses two different I/O panels. The left I/O panel is P0704822. The right I/O panel is a blank (P0704005). Only the CSL, CRT, NVP0, and NVP1 cutouts are used, as shown in [Figure 32](#).

Cabling to Meridian Mail, the network loop, and Command Status Link (CSL) is done through the left I/O panel only.

Figure 32
Meridian Mail module I/O panels



Application equipment module

The NT7D18 Application Equipment (AE) Module is the basic platform for the VMEbus-based auxiliary processor equipment. The AE supports two application modules. Only mechanical supports and an MPDU are supplied with the AE. No backplane, power supply, or I/O panel is included with the AE UEM; these are provided with the application modules that reside in the AE module. When an application module occupies only half the AE module, the I/O panel (P0704005) in the other half is not occupied.

The left side I/O panel in the AE UEM contains the system monitor connectors for cable NT8D46AA mounted on a PCB. Because of this, the entire I/O panel is not available for connectors. Additionally, because the application modules must be repaired in the field, the I/O panel must be removable. To solve this problem, a removable insert panel fits inside the I/O panel.

Meridian Link module

The Meridian Link module provides the I/O panel insert (P0726322) required for the left side position in the AE module. Outputs for the console, SDI port, and MDF are brought out on J7, J8, and J9. Outputs for the ESDI port and host computer are brought out on J2 and J3. Table 48 on page 172 gives the cabling assignments and [Figure 33](#) shows the I/O connector panel insert.

Figure 33
Meridian Link I/O panel

